

Rev 3

Fire River™

TECHNICAL MANUAL & USER HANDBOOK

[With Battery Operated Remote]



For use with Natural Gas (G20) or LPG (G31)

Important

It is recommended, even if you have fitted these appliances before, that you take the time to read through these instructions and follow them step by step.

Serial Number

Please quote this serial number when calling to discuss installation and spare part requests. The Warranty is valid for 1 Year from date of delivery. To register the appliance please complete the warranty card supplied and return to: Spirit Fires Limited. 4 Beaumont Square, Aycliffe Industrial Park, Newton Aycliffe, County Durham, DL5 6XN.

This manual must be handed to the owner of the property once the appliance has been installed and commissioned

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Appliance Technical Data

G20 I _{2H} 20mbar 440 NG9103 17.2 200mm 1.0m G20 I _{2H} 20mbar 440 NG9103 12.1 175mm 2.0m G20 I _{2H} 20mbar 440 NG9103 12.1 175mm 2.0m G20 I _{2H} 20mbar 460 NG9103 12.1 175mm 2.0m G20 I _{2H} 20mbar 460 NG9103 12.1 175mm 2.0m G20 I _{2H} 20mbar 460 NG9103 12.1 175mm 2.0m G25 I _{2H} 25mbar 440 NG9103 10.5 = 9.6 175mm 2.0m G26 I ₂ 25mbar 460 11.1 175mm 2.0m G25 I ₂ 25mbar 300 9.2 = 8.4 175mm 2.0m G26 I ₂ 25mbar 460 9.2 = 8.4 175mm 2.0m G31 I ₂ 12 = 1.2 1.2 = 1.2	Gas	Gas Type	Gas Category	Gas Pressure	Injector [x 2]	Pilot Assembly	Nominal Heat Input [Gross, kW]	Minimum Flue Diameter	Minimum Flue Length	Countries of Destination
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		3	13P(31)	2000	125	LPG9272	12.4	175mm	3.0m	LT, NL, PL, PT, SI, SK

Refer to Data Plate for model supplied. Gas Connection is via an 8mm Isolation Valve. Appliance Mass - Approximately 75kgs.

READ THIS FIRST

This appliance is supplied as a complete suite of enclosure of gas fire burner unit, enclosure and fascia. To comply with the approval this fire must be installed as designed.

- Gas Supply: DO NOT INSTALL THE APPLIANCE UNTIL A PIPE
 WORK FLOW RATE CHECK HAS BEEN DONE. INCORRECT
 PRESSURE WILL CAUSE THE FIRE TO FAIL THE COMISSIONING
 CHECK. This is a high power appliance and the inlet pressure "at the test
 point in the fire" with the fire operating on full must pass the
 commissioning test. Failure to observe this will mean the fire is unreliable
 and possibly dangerous.
 - Gas Flow Rates:
 - NATURAL GAS = 1.6 M3/HOUR
 - LPG/PROPANE = 0.8 M3/HOUR
 - Note on the LPG Version: If running this appliance from Gas Bottles the minimum requirement is 2 x 47Kg bottles with a regulator set to the required pressure and a changeover valve. Failure to do this will result in nuisance shutdowns especially in very cold weather
- Room Ventilation: This fire requires a 100cm2 free air wall vent in the room in which it is installed.
- <u>Fascia & Burner Ventilation:</u> There is an optional trim which can be fitted to the fire. This can also be used to allow a hidden vent to provide ventilation to the burner. If the fascia is not fitted an additional vent may be required to be designed see page 35.
- <u>Gather:</u> An optional gather is available to attach the enclosure to a 175mm class 1 flue liner. This gather should be ordered with the appliance however if this has been missed this can be ordered from Customer Services on 01325-327221.
- **Flue System:** This fire is approved for use with a class 1 or 175mm flue of 2 meters for Natural Gas or 3 meters for LPG minimum length. If a flue system in excess of the specified length is used this may cause a very strong draw to occur which will result in the flame being adversely effected and forced towards the back of the enclosure. This is unavoidable and is a site specific condition and does not indicate an appliance fault.
- <u>Flame:</u> As stated above, it is normal with this type of appliance for the flame to be directed towards the back of the enclosure. This will be worse where the fire is installed without the official gather and with a long flue.
- Remote Heat Shield: This fire is approved with the heat shield in place. The fire should never be operated without the heat shield; any resulting damage caused by heat is not covered by the warranty.

Unpacking the Appliance

Read these instructions fully before proceeding.

Carefully examine the carton for damage before proceeding. If it is obviously damaged, please contact supplier over whether to proceed.

Remove the fire and examine its general condition. If satisfied by the condition, proceed with the installation. PLEASE NOTE no claims will be accepted for damaged or faulty components once the appliance has been installed.

Read the installation instructions fully before starting to install the appliance. Special note should be taken to the different installation requirements of the two versions (with and without a trim). Check the delivery paperwork to confirm which version was purchased by the customer.

The installation should only be carried out by a GAS SAFE registered engineer, and in accordance with national and local regulations for gas.

The installation must also be in accordance with relevant parts of local and national building regulations.

For the Republic of Ireland, reference should be made to IS813 and ICP3 and any guidance notes from Bord Gais.

Failure to have the fire fitted by a qualified person nullifies ALL warranties and guarantees.

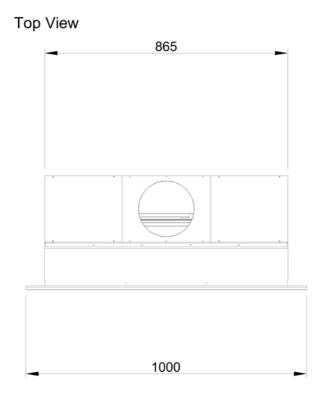
Fire River Parts List

Parts List

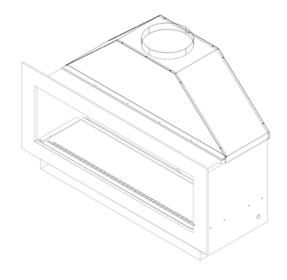
- Fire is supplied as a Kit:
 - o Brushed Steel Enclosure.
 - Front Shelf.
 - Burner Unit with Remote Control [pre-fitted]
 - Instruction Booklet
 - Remote Control Handset
- Optional Parts [if ordered]
 - Gather Unit
 - o Fascia Trim.
 - Manual Wall Switch [see supplement]
 - Convert from Battery to Mains Supply [see supplement]

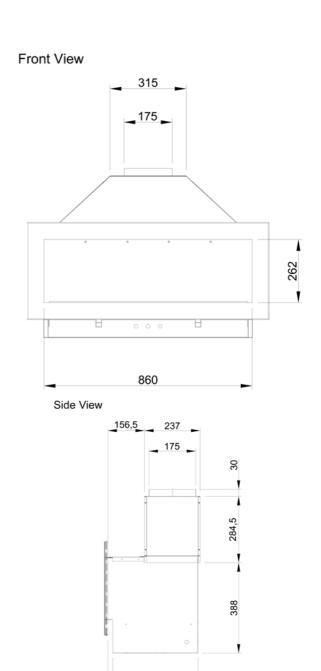
Please check your delivery note. Any missing parts must be notified within 48 hours of delivery. No claims can be accepted after this period.

Construction Dimensions



Perspective View

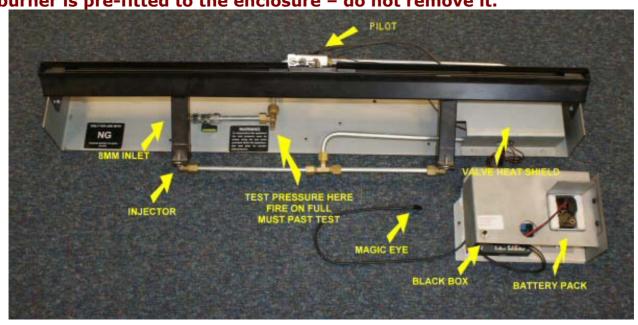




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Gas Burner Construction

Take some time to review the burner construction taking note of the positions of the main components and the required connections. The burner is pre-fitted to the enclosure – do not remove it.



Before starting to install the appliance review the Data Plate fitted to the appliance for the gas type and pressure requirements of the appliance. Ensure these are correct for the property supply.

This Fire has a battery remote control system and requires only the connection of an 8mm gas supply. The remote is operated via a handset and infra red magic eye positioned on the appliance.

The burner is pre fitted to the enclosure. There is no reason to remove it.

All CVO fires are given a 100% full function test at the factory before being shipped. We record over 40 test settings to ensure the fire operates correctly and inline with the CE approval document.

There are no adjustable parts on this fire. Never remove any wires from the black box or the remote system. All connections are required.

DO NOT DISMANTLE THE FIRE AS IT WILL INVALIDATE THE WARRANTY.

Remote Control System

Take some time to learn about the remote system fitted to this fire.

This is operated by a fully sequential battery remote system. This is powered by $6 \times AA$ batteries in the fireplace and a 9V battery in the handset.

The fire is operated by the Infra Red and the handset must be pointed directly at the magic eye on the fire to work. It requires "line of sight". Read the section on lighting the fire for more information. The handset will switch the fire on/off and regulate the flame up/down.

The hand set has a child safe feature to avoid accidental lighting. Please read "lighting the fire" section later in this handbook before operating the appliance.

Note: that if the fire shuts down it is set in "safe mode" to reactivate the fire press button #1 only on the handset. This will cause a beep. Now the fire can be lit again using the standard start-up sequence.

The remote system has a fault diagnosis system built in which is indicated by a number of beeps. Review the "fault diagnosis" section later in this manual for the relevant code. A warning sound when the internal batteries become low will be heard however if the batteries are totally dead there will be no sound. If the appliance fails to operate on the hand set change the batteries in both the appliance and the hand set as this is the most common cause of failure.

It is recommended that only "Lithium" batteries are used in the remote system to ensure a long life. Never add old batteries as the alarm system will sound. It will only reset with new batteries.

NEVER USE OLD BATTERIES. THE BLACK BOX HAS A "MEMORY" AND WILL CONTINUE TO SOUND THE ALARM EVEN IF THE BATTERIES ARE CHANGED.

- TO RESET THE ALARM:
 - TAKE OUT OLD BATTERIES AND WAIT 10 MINUTES
 - FIT A BRAND NEW SET OF LITHIUM OR ALKALINE BATTERIES
 - **O THE ALARM WILL RESET.**

General Installation Information

This fire is intended for decorative purposes. The installation must be in accordance with National Regulations and must be carried out by a qualified installer.

Clearances between the fire and all combustible materials must conform to National Regulations.

This fire must be installed and used in accordance with these instructions. Prior to installation, ensure that the local distribution conditions (identification of the type of gas and pressure and the adjustment of the appliance) are compatible.

The builders opening or fireplace opening must be constructed of a noncombustible material.

For some countries a non-combustible hearth must be fitted in front of the fire in accordance with National Regulations (e.g. United Kingdom).

Any flue damper plate or flue restrictor must be removed or fixed permanently in the fully open position, or shall only be fitted in accordance with National Regulations.

The chimney must be swept before the appliance is installed. The unit must not be installed unless the chimney/flue length is at least the distance indicated on page 3 (minimum flue height).

Before the fire is installed a flue test in accordance with National Regulations should be carried out.

The gas connections must be in accordance with National Regulations. An isolation valve, or valves, has to be fitted adjacent to the appliance which, when closed, allow(s) the complete burner and control assembly to be disconnected for maintenance or repair in accordance with National Regulations.

The pilot light and flame sensing device fitted to this fire is also an atmosphere sensing devise. If for any reason any part of the pilot assembly is to be replaced ALL the assembly including the pilot burner, thermocouple, electrode and injector must be exchanged complete for an original manufacturer's pilot assembly only. This atmosphere sensing devise is not adjustable and must not be put out of action. The pilot light shuts off both the main burner and pilot if evacuation of the combustion products is interrupted. If the fire shuts itself off, do not use the fire, and have the flue and fire checked by a suitably qualified person.

This fire needs an air vent within the room which will provide a minimum of 100cm2 free air in accordance with National Regulations. In some countries additional ventilation may be required

It is recommended that a guard be used for the protection of young children, the elderly or infirm.

This fire should be checked regularly to ensure that it is free from obstruction. A qualified person should service the fire regularly.

After installation, the chimney should be inspected and swept regularly to keep the flue clear and free from debris and excessive build up of soot. The fire needs to be covered up when work is undertaken, to ensure the unit does not get damaged or gas outlets blocked.

Do not throw rubbish on the unit, as this will block or hamper its efficiency.

Due to the newness of the materials, the fire may give off a slight smell for a period of time after commissioning. This is quite normal and any odours should disperse within a few hours of operation.

BEFORE STARTING CHECK:

- 1. Gas pipe work is it strong enough to supply this high power appliance?
- 2. Is there an air vent within the room providing fresh air from outside?
- 3. Chimney is it of the correct size and length to suit the appliance?
- 4. "Trimless" installation read the section on planning burner air.

Building and Installation Work

All building and gas installation should be carried out by a qualified and competent person, and must adhere to national and local legislations and regulations.

Before Starting

READ PAGE 4 FIRST

Building work should only commence after a thorough survey of the intended location of the impending installation has been completed and it has been established that the unit can be installed and operated without risk to the owner or tenants of the property or their neighbours.

Where existing chimney systems are to be used in conjunction with the FIRE RIVER, they should have been swept and undergone thorough examination to ensure that they are in a sound and safe condition, as well as providing an adequate draw when the gas fire unit is in operation.

A simple smoke test will reveal whether or not the chimney is working correctly.

Check gas pipe work to ensure the correct flow rate for the appliance.

This fire is approved for use with a Class 1 or 175mm Flue System with either 2 metres for Natural Gas or 3 meters for LPG minimum length. If a flue system in excess of the specified length is used this may cause a very strong draw to occur which will result in the flame being effected. It is normal for the flame to be angled towards the back of the enclosure.

Burner ventilation can be provided by a slot behind the optional fascia trim. If this is not fitted additional ventilation will need to be planned. See Page 14

Once installed all additional gas inlet holes in the enclosure [not the front vent] must be sealed with metal tape to avoid flame reversal which will damage the remote.

The enclosure and flue must be sealed inline with building regulations.

Failure to ensure the correct flue and burner ventilation requirements are met as outlined in this manual will result in damage to the fire which is not covered by the warranty.

It is important that the gas supply is disconnected before any old existing surround and hearth is removed.

Gas Supply

Consult the Data Plate within the appliance to ensure the correct gas type and pressure is available within the property. Before commencing to create the fire opening for the inglenook unit note that a gas supply is required. The gas supply pipe should run into the installed enclosure from either the rear, left or right hand sides, the gas supply is best run through the left side of the enclosure.

CHECK PIPEWORK FLOW RATE BEFORE INSTALLING (SEE PAGE 3)

The fire has an 8mm inlet via an isolation valve. The fire also includes a pressure test point elbow to test inlet pressure. The gas pipe work should be routed into the enclosure via the available access holes. If the gas pipe work is over 1.5mtrs in length it is recommended that the pipe work is increased in diameter from this point to 15mm, 22mm and possibly 28mm depending on the length to the meter – see technical section for gas consumption. This will ensure a stable gas supply.

Building Work

It is important that the gas supply is disconnected before any old existing surround and hearth is removed. Measuring from the floor surface, the intended location of the base of the enclosure unit is marked onto the wall. Allowances must be made for the steel gather, if required.

The Fire River enclosure should be located centrally to the existing flue/chimney at your desired height. If the fire is not placed central to the chimney, the flame picture may pull incorrectly. In some installations it is necessary to install a small lintel unit above the opening, if so an allowance must be made to accommodate the lintel. The Fire River does not have its own support lintel and a support lintel is not supplied with the unit.

The area indicated on the wall must be removed to house the Fire enclosure and burner unit. In some installations it may be necessary to install a small lintel above the opening, if so an allowance must be made to accommodate this lintel. (The Fire does not have its own lintel). After removing the excess brickwork to the required height, the base of the fire opening (which the Fire burner and enclosure will sit upon) has to be built.

To create a seal around the appliance and allow correct operation of the flu, the original fire opening must be closed using bricks or blocks, infill the void around the enclosure using block work or rubble. (It is advisable to install a solid base inside the fire opening to sit the steel framework supporting the burner unit on to.)

Room Ventilation

This fire needs an air vent supplying a minimum of 100cm2 free air into the room from outside. The air vent must comply with current building regulations.

Burner Ventilation

"TRIMLESS" VERSION

When installing the "trimless" version of the **Fire River** additional burner ventilation must be planned to provide fresh air into the burner box. This work should be planned before starting to install the fire. This additional burner air must be routed from "within the room the fire is installed" in to the burner box. Failure to observe this will result in serious heat damage to the remote system. This will not be covered by the warranty.

The normal way to do this is by creating a ducted space behind the plasterboard from the skirting level. The air vent must be at least 20mm deep and the full width of the burner flame. If it is positioned differently the flame will become unstable.

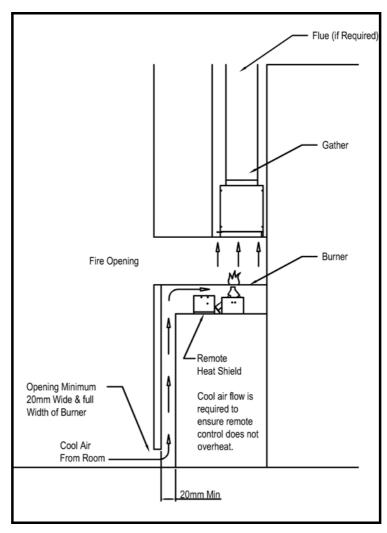
The system must be sealed so that air can only travel in one direction.

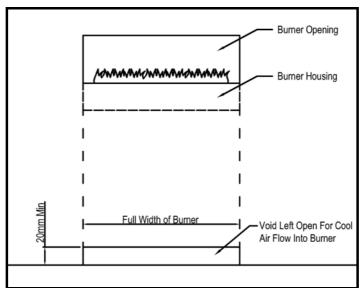
See the images on Page 15.

FIRE WITH TRIM

If the Fire River is being installed with the optional steel trim a section of the plasterboard below the front shelf must be cut out $860 \, \text{mm} \times 60 \, \text{mm}$. This gap will be hidden by the trim when fitted. The trim, when installed correctly, floats on the wall and has a gap all the way around. This gap will provide air into the burner tray.

Front & Side View



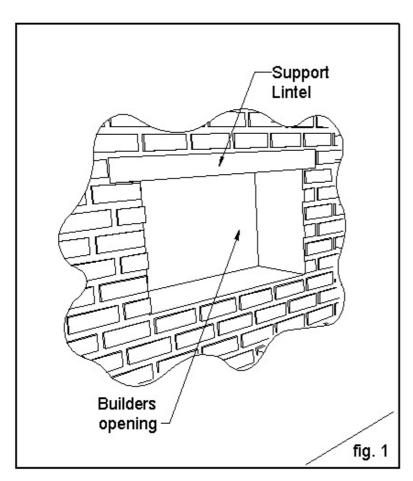


Installing the Enclosure

This fire is supplied with an enclosure and integral burner. The appliance is supplied with a fully tested and working gas burner. There is no need to dismantle or adjust the burner. Removal of any connections will result in the warranty being invalidated.

Great care must be taken when handling the burner to avoid damaging the remote system.

If using with the optional Gather, dry fit the gather to the enclosure taking note of where the gather and enclosure overlap. In some installations it may be possible to insert the gather into the opening and lift up to allow space to slide the enclosure in. This reduces the need for a very large builders opening.



The original fire opening must be closed, using bricks / blocks infill the opening to the required base of the burner, the void behind the brickwork should also be filled; block work or rubble can be used. (It is advisable to install a solid base inside the fire opening to sit the steel framework to).

See construction image to calculate builders opening.

The height is to be reduced and sealed once the unit has been fitted.

It is best to dry fit the Enclosure unit first to ensure clarity this can ensure a clear route for the gas.

Note: The front edge of the enclosure must be positioned with the front edge of the enclosure **1mm out from the finished wall**. The enclosure must be secured to the block work by screws and plugs through the base to ensure it cannot move. The burner must be secure within the enclosure

Gather Unit

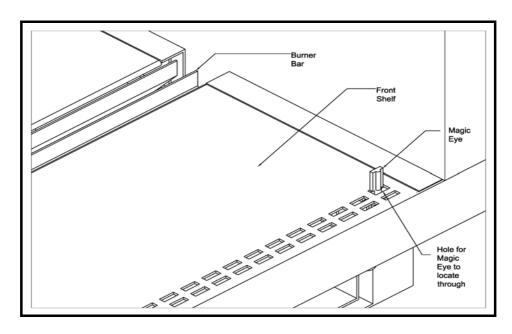
If the standard gather is not used, the flue must be connected to the enclosure in accordance with GAS SAFE and local regulation.

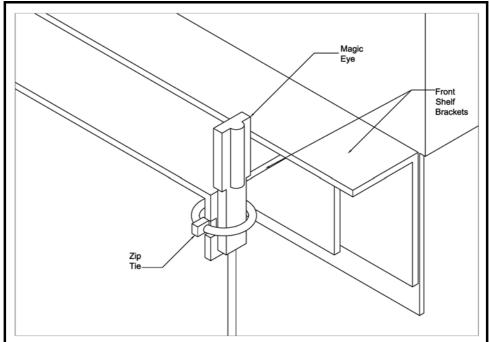
The gather has been designed to allow it to be inserted into the chimney opening and held up while the fire enclosure is installed. The gather must then be attached to the enclosure using the screws provided and sealed with fire cement. When using a flue liner the gather must be sealed to the liner by fire cement.

Gas and Battery Connection.

The gas line should now be connected to the 8mm inlet isolation valve. The battery pack should also now be connected ready for commissioning the burner. The front shelf is left off at this stage.

Fitting the Magic Eye (Metal Version)





The magic eye must be the correct way round (as shown above) to ensure "line of sight" and correct operation.

The burner should be tested for safe operation and gas leaks. For instruction on how to light the fire see the user section on **page 40**

Once tested the front shelf vanity cover should be fitted taking care not to scratch the enclosure.

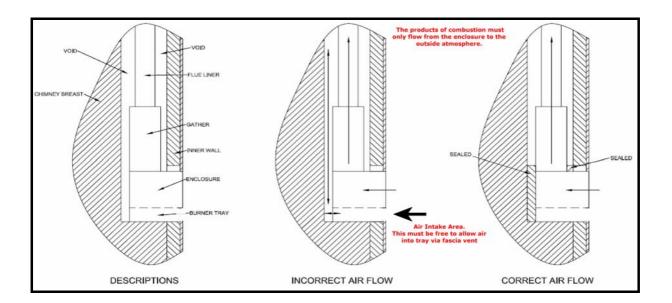
Fitting the Metal Fascia

The trim is optional and can be fitted after the fire is completed by using the two lower and two upper screws which secure it to the enclosure. The trim should be floating on the wall, not recessed into it.

Seal the Flue and Check Burner Ventilation

See Page 14 "burner ventilation" before proceeding.

This appliance requires a specific amount of ventilation to function as designed (correct flame picture), therefore any unused utility access points in the burner tray must be sealed with Aluminium foil tape.



When installing the enclosure into an existing chimney or with a flue liner the enclosure & gather must be sealed to the existing chimney to ensure that air cannot flow behind the enclosure (flame reversal). Failure to do this will result in serious damage to the burner unit and enclosure. This damage is not covered by the warranty.

COMMISSIONING THE APPLIANCE

WARNING: The burner inlet flow rates are factory set and sealed. Under no circumstances should these settings be changed. The aeration is fixed. Do not change the burner aeration. This fire must not be operated without the heat shield in place over the Black Box. Failure to do this will result in serious damage to the remote system which will not be covered by the warranty.

The burner is also tested to 150mBar to ensure there are no gas leaks in the burner. Do not adjust any fittings within the fire.

Use the commissioning sheet on page 23 completing each section in turn. Refer to the "lighting the fire" section later in this handbook to learn the remote system and sequence. To commission the appliance follow the below steps fully.

CHECK THE GAS PRESSURE

- Record you findings in the sheet on page 23.
- The appliance is supplied with a pressure test elbow and gas tap. See Image Below. Connect an 8mm gas supply to the tap. Ensure the gas tap is in the open position. Remove the screw from the test point within the appliance and connect a manometer. With the appliance off check for gas soundness in the supply circuit. If there is a pressure drop correct the pipe work before continuing.
- The appliance requires 6 x "AA" Lithium batteries to operate. Using lower quality batteries is not advised. The Battery Pack is disconnected when supplied to increase the life of the batteries. **Reconnect the battery by plugging in the socket.**
- The appliance is supplied with an Infra-Red Remote Control Unit which is operated via a hand set and magic eye positioned on the right hand side of the enclosure.
- Read the section "lighting the appliance" and using the handset start the fire. There is a 10 second period where the fire will spark. If the pilot does not light repeat the test until the gas line has been purged.
- Once lit turn the fire off again and ensure the manometer is fitted as shown in the image. You will now start a set of tests which will confirm the fire is installed safely. It is very important that this test is performed as stated to ensure the appliance is safe and reliable. The inlet supply pressure must be within (+/- 1mb) of the pressure stated on the Data Plate. For example a 20mBar NG appliance must read between 19mbar and 21mBar.
- **TEST 1** Fire Off what is the standing pressure is it within spec?
- Now light the fire again and while it is operating on Pilot Only.
- **TEST 2 –** Fire on Pilot Record gas pressure is it within spec?
- The fire will open on to Full, let it run for 5 minutes.
- **TEST 3 –** Fire on Full Record gas pressure is it within spec?

- Now light all other gas appliances in the home and run tests 1-3 again.
- Record your results in the check sheet.
- THE PRESSURE AT ALL TIMES MUST BE WITHIN 1MBAR OF THE DATAPLATE READING



- **IF THE TEST FAILED:** If it is not possible to maintain the pressure at the required level, TRANSCO, BORD GAIS or the propane supplier must be called to adjust the governor to the house before the appliance can be commissioned further.
- **IF THE TEST PASSED:** Disconnect the pressure gauge, replace the pressure test point sealing screw and test the appliance for gas soundness. Insert the front shelf.

CHECK THE FLUE SYSTEM

• Turn the appliance to the maximum setting. Leave the appliance for 10 minutes and then test that all the products of combustion are entering the flue by traversing the perimeter of the fireplace opening or canopy using a smoke generator e.g. smoke matches.

COMPLETE THE COMISSIONING

- The customer should be shown in detail how to operate the appliance and the installation and user manual given to the customer.
- The customer must also be made aware that the appliance must be serviced every 12 months and that chimney or flue system should be checked regularly to ensure the appliance operates at optimum performance.

- The customer must be told not to block the room air vent.
- The warranty card is to be completed by the registered engineer who has commissioned the appliance. This is to validate the warranty. The card must then be given to the customer for return to the factory.

Final Check List

- Are the Flue & Enclosure sealed to ensure no air can travel around the sides or back of the enclosure?
- Are all other access holes in the burner tray sealed with metal tape?
- Is the heat shield fitted?
- Is there room ventilation?
- Has the customer being shown how to operate the appliance?
- Has the customer been shown how to replace the handset and main appliance batteries?
- Has the commissioning sheet on page 23 been completed?
- GIVE THE BOOKLET TO THE CUSTOMER.
- GIVE THE WARRANTY CARD TO THE CUSTOMER.

If you have any questions, or the fire is not operating correctly, contact the manufacturer on 01325-327221 before you leave the installation.

If the appliance is not fitted in strict accordance with these instructions, CVO cannot be held responsible for any damage caused and reserve the right to charge for any corrective work.

CVO Commissioning Checklist

Important Notice

Explain the operation of the appliance to the end user, hand the completed instructions to them for safe keeping, as the information will be required when making any guaranteed claims.

Flue Check	Pass	Fail
1. Flue is correct for appliance		
2. Flue Flow test		
3. Spillage test		
Gas Check		
1. Gas soundness & let by test		
2. Standing pressure test		
3. Appliance working pressure (on High Setting) NB All other gas appliances must be operating on full		
4. Gas rate		
5. Does ventilation meet appliance requirements		

Dealer and Installer Information

Dealer	Installation Company
Contact No	Engineer
Date of Purchase	Contact No
Model No	Corgi Reg No
Gas Type	Date of Installation

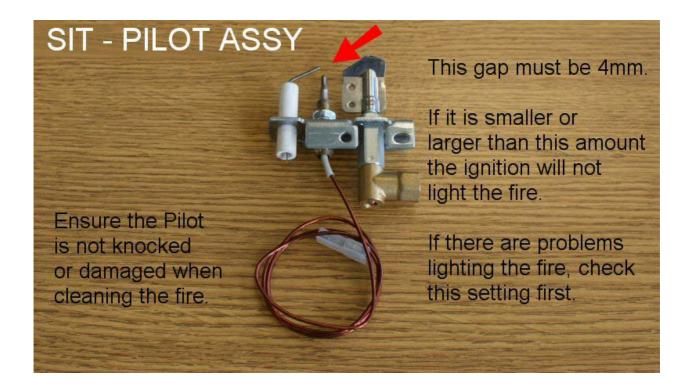
This product is guaranteed for 1 year from the date of delivery, as set out in the terms and conditions of sale between CVO and your local CVO dealer. This guarantee will be invalid, to the extent permitted by law, if the above Commissioning Checklist is not fully completed by the installer.

Oxygen Depletion Pilot System

There is a highly sensitive oxygen depletion sensor designed into the pilot light. If any part is damaged the entire unit must be replaced. Do not attempt to bend or alter the flame head, thermocouple or aeration hole. Use only genuine spare parts as similar looking parts from other appliances may well give different or inferior performance and could lead to a hazard.

Spark / Ignition Failure

The gap between the pilot electrode and the pilot should be 3.5 – 4.5mm and normally adjustment is not necessary (the electrode is very brittle). The spark should jump across the gap between the electrode and the gas outlet on the pilot head. If the ignitor fails, a lighted taper can be inserted into the pilot area to check that gas is reaching the pilot.



Burner Flame

The flame on this type of appliance is normally directed towards the rear of the enclosure. This is normal due to the opening size and flue system. The flame will never stand "upright". It is to be expected that over time the surface on the rear of the enclosure will tarnish. This is typical "wear and tear" for a gas fire.

If the flame is drawn under the shelf this highlights a serious installation fault and the appliance must not be operated until the cause is found. A typical cause would be unsealed burner holes or failure to seal the enclosure and flue (flame reversal). Any resulting damage is not covered by the warranty which covers "defective" parts only.

Warning: Fire Guards & Hearths

This appliance is not fitted with an integral guard. In normal use consideration may be given to the use of a fireguard conforming to BS6539 or BS6778, so that the approach to the appliance is limited such that access to the flame is minimised

It is recommended that a fireguard conforming to BS6539 or BS6778 is used for the protection of young children, the elderly and infirm.

The installer is to advise the user not to stand too close to the appliance for prolonged periods of time and warn that loose clothing is particularly at risk of burning due to the presence of an unquarded flame.

In addition, the installer is to advise the user against placing combustible material directly in front of the appliance. Floor coverings, such as carpets, are considered to be acceptable.

For some countries a non-combustible hearth must be fitted in front of the fire in accordance with National Regulations (e.g. United Kingdom).

Fault Diagnosis/Troubleshooting

Every CVO fire is tested in the factory and give a 40 point check to ensure it operates correctly. It is highly unlikely it would not operate when installed as designed.

The biggest cause of installation problems with this fire are caused by incorrect GAS PRESSURE. This is normally due to ignoring the instructions in the section "READ THIS FIRST" where is clearly states to check the gas pipe work before installing the fire. This is a 12kw appliance and needs a very strong gas supply that is maintained at within 1mBar of the appliance setting.

NATURAL GAS = 19mBar to 21mBar. LPG = 36mBar to 38mBar.

If the commissioning procedure is not followed and the fire is left to run with the wrong gas pressure the fire will:

- 1. Fail to light.
- 2. Light for a few seconds.
- 3. Shut down unexpectedly.
- 4. Have a low flame.
- 5. Have a yellow flame.
- 6. Cause sooting in the enclosure.

Other areas to check during installation are:

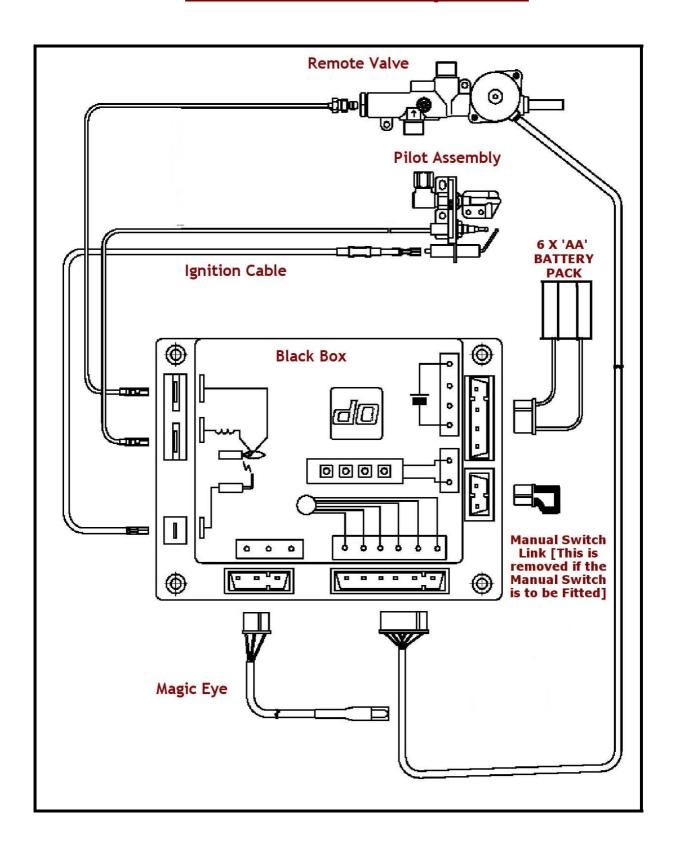
- 1. Has the pilot been knocked and the gap too large?
- 2. Are the batteries fitted properly?
- 3. Is the magic eye positioned correctly?
- 4. Is the flue operating correctly without reverse drafts or air leaks?

Unexpected or Sudden shutdown

If the appliance is shut down unexpectedly the valve must be reset first before the fire can be re-lit. To do this press the "OFF" button until a beep is heard. Then commence the starting sequence as detailed above by pressing both left had buttons at the same time. The pilot is a safety device which monitors the gas pressure and flue conditions. If a fault in either of these areas are detected the pilot will not allow the fire to be lit. Please review the installation conditions before proceeding.

Symptom	Check List	Tick
The system "beeps" all the time.	There is a fault diagnosis system built into the battery remote. The remote gives out a sequence of "beeps". This is a code which indicates a fault. See page 29 for alarm sequence.	
Appliance clicks but	Check spark lead is connected properly.	
no spark or weak spark.	Check spark electrode is in the correct area and the gap correctly distanced to the pilot.	
	Check for a good spark. Check the spark is in the right area.	
Appliance sparks but does not light pilot.	Check that the ventilation is not too strong and drawing the gas away from the pilot.	
	Check that there is gas at the input and at the pilot. Check that remote valve is operating correctly.	
	Check isolation tap/shut off is open.	
If there is no gas.	Check for blockages in the gas pipes.	
	Check for a good spark.	
If there is gas but	Check the spark is in the right area.	
pilot does not light	Check that the ventilation is not too strong and drawing the gas away from the pilot.	
	Check the pilot gas slot is clear.	
	Check the pilot flame is heating the thermocouple.	
Pilot lights but does not light main burner	Check the thermocouple nut is properly tightened into the valve.	
	Check that the pilot lights early on ignition clicks.	
	Check ventilation is not too strong and drawing the pilot flame away from the thermocouple.	
Burner lights but turns off after a few minutes	When using LPG Bottles ensure bottle is not empty. To run this appliance on bottles a minimum of 2 x 47KG bottles with a changeover valve is required. The bottles must have a suitable regulator.	
	Check thermocouple nut is properly secured to the valve.	
	Check ventilation is not too strong and the flame is not blowing off the thermocouple.	
	Check gas pressure is correct and maintained at constant level - especially with other appliances in the home working.	

Remote Control Components



Battery Remote System - Alarm Sequence

This fire is operated via a battery remote system with AA batteries. The remote system has a built in alarm system which indicates and faults which may arise. This is shown by a sequence of a pre-defined number of "beeps" corresponds to a certain failure.

BLACK BOX - IR

Alarm sound description

- 3 x beeps Manual Wall Switch Keyboard Failure Substitute the keyboard with another one and verify the sound alarm stops.
- 4 x beeps Valve Motor Failure
 Substitute the valve with another one. Repeat the ignition sequence and verify the sound alarm stops.
- 5 x beeps Driver Leakage [Black Box Faulty]
 Substitute the board: the motor drive circuit is damaged. Execute an ignition sequence and verify there's no sound alarm.
- 6 x beeps Under Voltage Low battery
 Substitute the battery with a new one and verify the sound alarm stops.
 Before inserting the new battery pack, remove the old one and wait until the sound disappears. Wait at least 2 minutes before adding the new batteries. If the sound is still present after adding new batteries, execute an ignition sequence.
- $7 \times \text{beeps} \text{Low Battery}$

Substitute the battery with a new one and verify the sound alarm stops. Before inserting the new battery pack, remove the old one and wait until the sound disappears. Wait at least 2 minutes before adding the new batteries. If the sound is still present after adding new batteries, execute an ignition sequence.

Only use high quality Alkaline or Lithium batteries in the appliance and hand set to ensure a long and reliable life. NEVER USE old batteries, the set must be replaced as a complete set of new batteries.

Service and Aftercare Requirements

When completing the annual service of the unit, refer to the enclosed technical installation and operational manual & the remote control instruction document.

The gas unit should be installed to the manufacturer's instructions by a Gas Safe registered gas installer, every 12 months the gas fire unit should undergo a regular service, this work should be carried out by a competent person who is Gas Safe registered, familiar with the CVO Fire range of goods.

When carrying out the annual service, the competent person should examine and verify the following;

- The correct safe operation of the ODS (oxygen depletion system)
- That the fire unit correctly cross-lights
- A pressure drop test to verify that there are no gas leaks
- That the electronic ignition system operates correctly
- That the burner surface is free from damage and debris
- That the owner has a copy of the installation and operation manual

Servicing Instructions

General

CVO Recommend that this appliance is serviced every 12 months by a GAS SAFE Engineer.

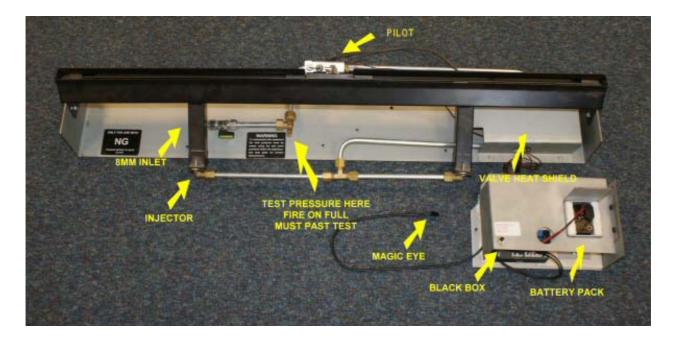
The following servicing procedure should be carried out regularly and only by a qualified person.

Note: foreign bodies, which can gather on the surface of the burner unit, it is inevitable that servicing can be a dusty operation. Suitable precautions should be taken.

Important: The pilot and flame sensing device fitted to this fire is also an atmosphere sensing device. If for any reason any part of the pilot assembly is to be replaced, the entire assembly including the pilot burner, thermocouple electrode and injector must also be exchanged. This atmosphere sensing device is not adjustable and must not be disabled.

Servicing Procedure

- Turn off the fire and allow cooling time.
- Turn off the gas supply at the isolation tap.
- Remove the fascia.
- Using a Phillips style *screwdriver*, loosen the screws on the mixer tube then undo the injector nut, and remove the injector.
- Clean the injector and remove blockages. Do not use a needle or wire, as this may widen the journals, which are set to the C V O test standards.
- Using a soft brush or vacuum cleaner, carefully remove any debris from the burner unit.
- Make sure the pilot journals are clear and free from dirt.
- Re-assemble the fire in the reverse order, and re-connect the gas supply then check for soundness.
- Check the pilot for a good flame.
- Re-commission the fire (See section earlier in this booklet).



For Spare Parts please call 01325-327221 and ask for customer service.

Spare parts are not returnable. CVO Fire cannot accept responsibility for incorrect parts being ordered. When ordering replacement components or requesting technical assistance, you should at all times quote the following:

- Type of fire & Gas supply (LPG or NG) as shown on Data Plate
- Unit serial number as shown on Data Plate or front of booklet.
- Component part number or description of fault

Exchangeable Components List

CVO Part Code	Item Description	Gas Type	Code Number	Qty per Fire	Engineer Exchange Parts	User Exchange Parts
Injecto						
AC002	1.60mm	LPG	160	2	Yes	No
AC080	1.25mm	LPG	125	2	Yes	No
AC004	090	NG	090	2	Yes	No
AC021	460	NG	460	2	Yes	No
AC063	440	NG	440	2	Yes	No
AC069	340	NG	340	2	Yes	No
AC096	300	NG	300	2	Yes	No
Pilot As	sembly					
AC001	NG Pilot	NG	SIT9103	1	Yes	No
AC058	LPG Pilot	LPG	SIT9272	1	Yes	No
Remote	e Parts					
GC049	Black Box	BOTH	30106850000	1	Yes	No
GC050	Remote	BOTH	81104711000	1	Yes	No
	Valve					
GC032	Ignition	BOTH	30106600401	1	Yes	No
	Cable					
GC012	IR Sensor	BOTH	30106600010	1	Yes	No
GC052	IR Handset	BOTH	30106800101	1	Yes	Yes
Other Remote Control Parts are available upon request.						

Call 01325-327221 and ask for Customer Services to order spare parts. We can email a set of images to confirm the parts required.

As indicated above parts must be changed by a qualified gas engineer. When calling you will be requested to provide both the serial number of the fire and gas safe registration number of the person who will carry out the repairs.

Fitting Spare Parts

The only "user" replacement part for this gas fire is the remote handset. All other parts must be fitted by a trained gas engineer. The fitting of replacement parts must be carried out by a qualified GAS SAFE Engineer inline with current regulations. When removing any parts from the remote system these should be replaced in the same manner using the "schematic diagram" in this booklet. When changing the injectors or pilot great care must be taken to assemble the parts in the correct manner to ensure the fire functions as designed.

Burner Removal

Removal of the burner during installation will invalidate the warranty. Speak to our technical department.

If the burner needs to be removed at anytime for repair follow the steps below:

- Remove the front shelf.
- Remove the 2 cross headed screws on each side which hold the front shelf mounting brackets to the enclosure.
- Disconnect the gas and electricity supply.
- The burner carriage is screwed to the bottom of the enclosure by 2 screws. Once removed the full burner assembly will lift out.
- Refit is the same procedure in reverse.
- The fire should be commissioned once refitted.

Fitting the Optional Wall Switch

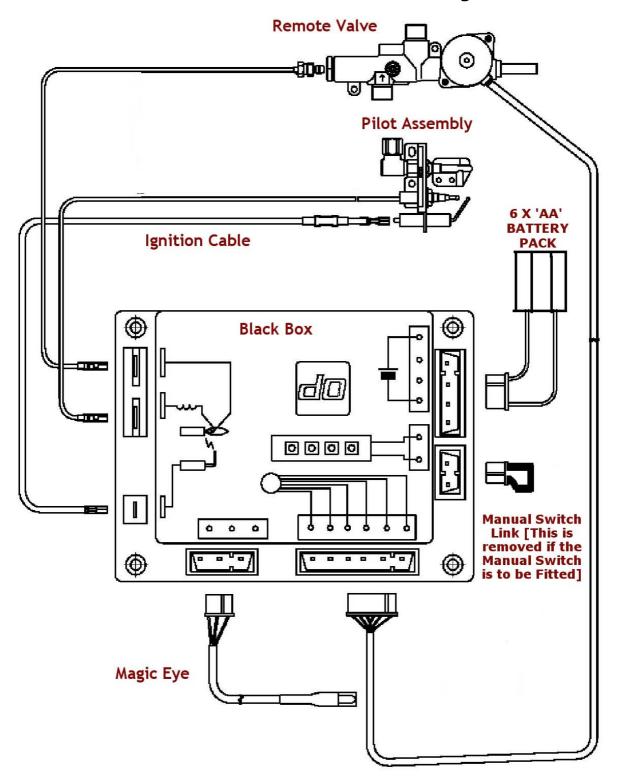
Important

This work must be carried out by a GAS SAFE REGISTERED ENGINEER.



Remote Diagram

Take some time to review the attached diagram



NOTE THE POSITION OF THE "LINK"

INSTRUCTIONS

- Use the gas isolation valve to isolate the gas.
- Taking care not to damage any components on the circuit board remove the heat shield.
- Note the position of the link in the circuit diagram.
- Gently remove the link and replace this with the wall switch cable.
- Route the cable as require ensuring that it is kept away from hot surfaces.
- Secure the wall switch in the required place and connect the cable.
- Refit the heat shield on the remote system.
- Reconnect gas and check for leaks.
- Review the section on "lighting the fire" to ensure the wall switch operates correctly.
- Operate the fire as normal.

VERY IMPORTANT NOTE

If the link "or" the wall switch is not fully connected to the remote the remote system will not work.

To confirm:

THE LINK MUST BE FITTED

Or

THE WALL SWITCH MUST BE FITTED

CVO Fire will not accept any warranty claims resulting from damage caused by fitting or removing the manual wall switch from the fire.

Converting the Fire To Mains Supply

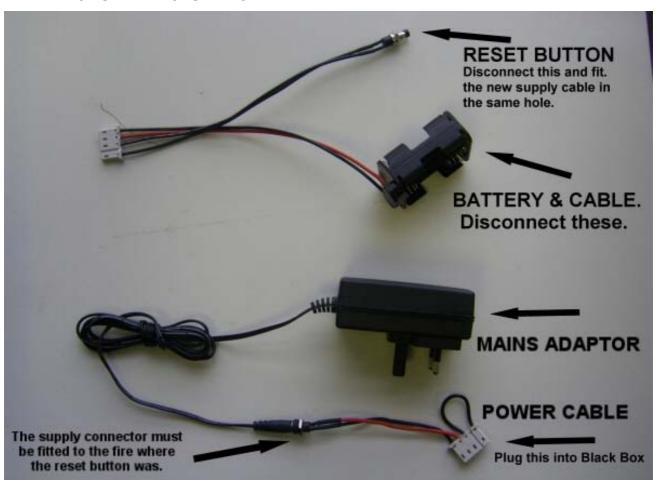
This must be done by a GAS SAFE Engineer and trained electrician.

1. Parts Required:

- a. Mains Power Adaptor
- b. Mains Power Connector
- c. These are available as optional spare parts from the customer service department. Call 01325-327221

2. Procedure

- a. Remove the remote heat shield and disconnect the battery pack, supply lead and reset switch from the fire.
- b. Replace the reset switch with the power supply cable.
- c. Connect the power adaptor to the supply cable.
- d. Connect the power adaptor to the mains supply.
- e. SEE IMAGES BELOW





Rev 3

Fire River™

USER HANDBOOK

[With Battery Operated Remote]



Contents

Page 41	General Information
_	Lighting the Fire - Start/Shutdown Instructions
_	Using the Manual Switch [if fitted]
Page 46	How to Shutdown if the Handset is Lost/Broken.
Page 46	How to Reset the Fire
Page 47	Replacing the Batteries
Page 48	Cleaning Instructions
Page 49	Fire Guards and Hearths
Page 50	Warranty Information.
Page 52	Contact Details

General Information

A qualified GAS SAFE registered installer is required to fully install the appliance, failure to do this may render the appliance dangerous and will invalidate the warranty.

This fire is intended for decorative purposes. Any purpose-provided ventilation should be checked regularly to ensure that it is free from obstruction. The fire should be serviced regularly by a qualified person.

The chimney should be swept before the appliance is installed, and should be swept and inspected regularly to ensure that all of the products of combustion are entering the flue and there is no excessive build up of soot.

Do not throw rubbish et cetera upon the burner surface area. Debris from any source, or soot formed, should be removed from time to time, see 'Cleaning instructions'.

The pilots ODS (Oxygen depletion sensor) must not be put out of operation. The user must not adjust the pilot.

If any of its parts are damaged and need to be exchanged the original manufacturers parts must be used.

Once the flue and fire units have been checked and remedial action taken, the fire is ignited in the manner depicted in section 'Lighting the fire'.

Due to the newness of materials, the fire may give off a slight smell for a period of time after commissioning. This is quite normal and any odours should disperse within a few hours of operation.

For some countries a purpose provided air supply must be fitted in accordance with National Regulations. For the UK 100cm2 airvent to the outside is required.

This fire should be checked regularly to ensure that it is free from obstruction. A qualified person should service the fire regularly.

Fire Guards: It is recommended that a fireguard conforming to BS6539 or BS6778 is used for the protection of young children, the elderly and infirm.

Pilot Assembly: The pilot light and flame sensing device fitted to this fire is also an atmosphere sensing device, which shuts off both the main burner and pilot if evacuation of the combustion products is interrupted. If the fire shuts itself off, restart the fire following the procedure in section 'Lighting the fire'. If the fire continues to shut itself off do not use the fire, and have the flue and fire checked by a suitably qualified person.

<u>Appliance Start Up / Shut Down Instructions</u> (<u>Lighting the Fire</u>)

The appliance is supplied with an internal battery power supply and is operated via handset. There are $6 \times AA'$ batteries inside the appliance and $1 \times 9V$ battery in the handset. Only use good quality batteries to ensure a long life.

If the main burner or pilot light is extinguished during lighting, do not attempt to re-light the pilot within three minutes.

To Reset the Appliance:

If the appliance is shut down unexpectedly the valve must be reset first before the fire can be re-lit. This can be done by pressing the "OFF" (button #1) until a beep is heard. Wait a few seconds then commence the starting sequence as detailed below by pressing both left had buttons at the same time.

Using the Handset (see image).

- <u>To Light the Fire</u> As a "child proof" system both buttons #1 & #2 must be pressed at the same time for a number of seconds until the ignition (spark) sequence starts. To operate correctly the handset must be pointed directly at the magic eye on the appliance. When the pilot flame presence is detected (ionization flame control) the system holds for 10 seconds to warm the thermocouple. Once the thermocouple is warm enough to hold the magnet unit the valve will allow gas to the burner at the maximum setting.
- In case of failure during pilot ignition sequence, the EDB puts the system in safe mode. To restart the ignition sequence press Button #1 again.
- <u>Standby Mode</u> It is possible once the fire is lit to operate in standby mode with pilot only lit. To do this press button #2.
- <u>High Setting</u> By pressing Button #3 the burner flame is increased to the maximum rate.
- **Low Setting** By pressing Button #4 the burner flame can be reduced to the minimum rate.
- **Turn Off** To turn the appliance OFF Button #1 is pressed.

Each time a button is pressed a "beep" will be heard.



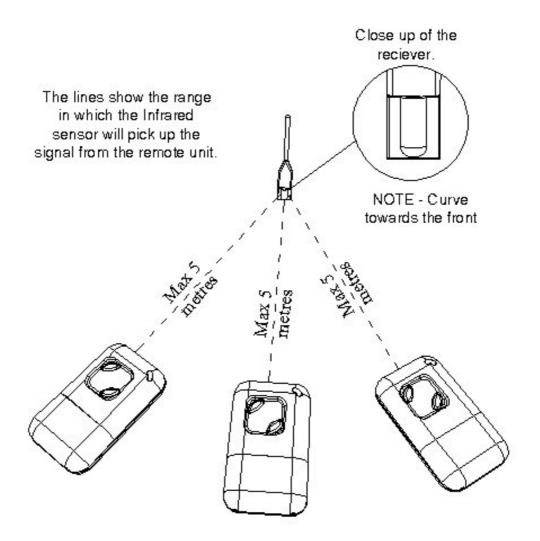
To Summarise:

- Button #1 & #2 together This switches the appliance ON.
- o Button #1 This switches the appliance OFF and Resets the Appliance.
- Button #2 This sets the unit into standby mode (pilot only)
- Button #3 This sets the flame at maximum rate.
- o Button #4 This sets the flame at minimum rate.

Each time a button is pressed a "beep" will be heard.

Infra-Red Remote Operation

Infrared systems require "Line of sight" between the handset and the sensor at the appliance, it is a standard safety feature to ensure that the appliance cannot be remotely lit from another room.



The range of your remote control unit is around 5 metres. It is very important the handset is directed toward the infrared eye on the appliance

Lighting the fire with the Manual Switch.

There is an optional wall switch. This is a manual switch membrane which can be stuck to the wall. Please ensure that the switch and cable do not become detached during assembly. Refer to the remote fault diagnosis if the unit "beeps" repeatedly. If the switch is not to be used the remote "link" must be fitted to the remote black box. The fire will not operate without either the switch or the link.



- Button #1 By pressing this switch, this starts the ignition sequence (press & hold for 3 sec minimum). The gas to the pilot is open and the magnet unit pressed by the motor, the spark is generated. When the pilot flame presence is detected the system holds for 10 seconds to warm the thermocouple.
- Once the thermocouple is warm enough to hold the magnet unit the valve will allow gas to the burner at the maximum setting.
- In case of failure during pilot ignition sequence, the EDB puts the system in safe mode. To restart the ignition sequence press Button #1 again.
- It is possible once the fire is lit to operate in standby mode with pilot only lit. To do this press button #2.
- By pressing Button #3 the burner flame is increased to the maximum rate.
- By pressing Button #4 the burner flame can be reduced to the minimum rate. This may involve pressing the switch a number of times in steps to get the lowest setting.
- To turn the appliance OFF Button #1 is pressed.
- Each time a button is pressed a "beep" will be heard.

How to Shutdown the fire if the Handset is Faulty or Lost while the Fire is Lit

The appliance has a safety shut down switch which is built into the remote system. This is in the form of a button fitted inside the appliance. In the unlikely event that the wall switch is not fitted and the handset is lost, damaged or broken while the fire is lit the fire can be shutdown by pressing this button.

Safety Shutdown Procedure

- Carefully lift the front shelf taking care that the appliance will be hot.
- The reset button is fitted on the lower left edge of the remote shield. (See images in the battery section)
- Carefully insert hand below the shelf taking care not to touch any hot surfaces and press and hold the button for up to 60 seconds.
- The appliance will shut down.
- Taking great care not to touch any of the hot surfaces carefully remove your hand and replace the front shelf.
- Do not use the appliance until the handset has been repaired or replaced.
- To purchase a new handset call 01325-327221.
- If the fire has been converted to mains operation the procedure is the same however the power cable must be unplugged from the socket which has replaced the reset button.

How to Reset The Fire

If the fire shuts down unexpectedly the valve will be locked in "safe mode" and must be reset before the fire can be re-lighted. To do this press the "OFF" button until a beep is heard. Then commence the starting sequence as detailed above by pressing both left had buttons at the same time.

The pilot is a safety device which monitors the gas pressure and flue conditions. If a fault in either of these areas are detected the pilot will shut the fire down. If shutdown occurs again do not use the fire until it has been checked by a gas installer.

Replacing the Batteries

Main Appliance Batteries

To ensure a long life use a set of brand new lithium batteries. Always replace all 6 batteries at the same time otherwise the alarm will continue to sound. The remote has a memory and will highlight old batteries being used. If the remote alarm indicates that the batteries are "flat" do not use the appliance. Ensure the appliance is switched off and has had time to "cool down" before starting to replace the batteries. Lift the front shelf of the appliance taking care not to scratch the sides of the enclosure. Lift the battery cover and lift out the battery pack. Do not pull on the wires or they will be damaged. Remove the old batteries and wait for the alarm to sound again. Wait a further 2 minutes then fit 6 x AA batteries in the correct order and replace the battery pack in the holder, ensuring that no wires are disconnected. Replace the battery cover. Do not use the appliance with the battery cover open. Refit the front shelf. SEE IMAGES BELOW:





Hand Set Batteries

Turn over the hand set and unclip the battery cover. Fit a new 9V battery and refit the battery cover. The appliance should now operate normally.

NOTE: CVO Fire recommends that only high quality batteries are used in this appliance. Lithium batteries provide the longest life.

Cleaning Instructions

Before cleaning the appliance turn off the Fire unit and allow it to cool for a number of hours. Before using any cleaning materials test a small area first to ensure compatibility with the appliance finish. CVO Fire cannot be held responsible for damage caused by cleaning the appliance.

Burner Bar / Deposits

It is normal for the burner bar to show a reddish or white deposit. This is caused by bi-products of the gas being burnt and is unavoidable. This can be remedied by using a stove paint like **Hotspot High Temperature Stove Paint** which is sold in 100ml cans online for approx £7. Similar products may also be available from major DIY stores or fireplace retailers. It may be required to paint the burner bar every 6 months or so depending on usage.

Cleaning the Gas Fire Burner and Enclosure

The most effective method of dust/debris removal is achieved with the aid of a vacuum cleaner however; great care must be taken to ensure that the pilot assembly is not touched. Using a vacuum cleaner with a soft brush head gently remove any debris/dust from inside the enclosure and around the burner unit. Once all of the dust and debris has been removed the surfaces can be cleaned with the use of a soft cloth and a hand held "stainless steel" cleaner which is available from most supermarkets.

Cleaning the Metal Fascia

This can be done with a soft cloth and a hand held "stainless steel" cleaner which is available from most supermarkets.

Removing spillages

This appliance has an electronic remote system. Where a liquid has been spilled onto the surface of the fire or enclosure DO NOT USE THE APPLIANCE – contact your installer to ensure the remote system functions correctly.

Wax

Never place candles on the burner shelves. If molten wax enters the burner unit – DO NOT USE THE APPLIANCE - contact your installer to remove the spillage and ensure the remote system functions correctly.

Warning: Fire Guards & Hearths

This appliance is not fitted with an integral guard. In normal use consideration may be given to the use of a fireguard conforming to BS6539 or BS6778, so that the approach to the appliance is limited such that access to the flame is minimised

It is recommended that a fireguard conforming to BS6539 or BS6778 is used for the protection of young children, the elderly and infirm.

The installer is to advise the user not to stand too close to the appliance for prolonged periods of time and warn that loose clothing is particularly at risk of burning due to the presence of an unguarded flame.

In addition, the installer is to advise the user against placing combustible material directly in front of the appliance. Floor coverings, such as carpets, are considered to be acceptable.

For some countries a non-combustible hearth must be fitted in front of the fire in accordance with National Regulations (e.g. United Kingdom).

WARRANTY INFORMATION

This appliance carries full CE approval and has a long and reliable history. The CE approval ensures that, if installed correctly, the appliance will function as designed. If the appliance develops a fault please refer to the fault diagnosis section earlier in this booklet for possible causes.

This appliance is supplied with a 12 month warranty from the date of delivery.

The Warranty covers defective parts only and does not cover typical wear and tear that occurs with a gas fire appliance.

In order to make a warranty claim you will be required to supply the serial number of the appliance [as shown on the front of this book] and full details of the GAS SAFE engineer who installed the appliance - we may request a copy of the installation receipt. Failure to supply details of the Registered Engineer who installed the appliance will invalidate the warranty.

To register your appliance please complete and return the warranty card supplied with the fire.

To raise a warranty claim call Customer Service on 01325-327221.

IMPORTANT NOTE - "Heat Damage"

This fire must never be operated without the heat shield in place over the Black Box. Failure to do this will result in serious damage to the remote system.

We will not accept any claims for "melted remote system". In this instance in highlights a very serious issue over the installation of the appliance. The appliance has been tested to CE standards to ensure, when installed correctly, that all of the components operate within the designed temperatures. In the instance of the remote system becoming hot enough to melt it highlights an install fault not a component failure. Typical causes are – using the fire without the heat shield, incorrect burner ventilation, unsealed enclosure, an unsealed flue system or flame reversal. Before purchasing new parts to repair the fire the cause of the melting must be rectified.

We will not accept any claims where the burner wiring or connections have been tampered with.



ONLY USE GENUINE REPLACEMENT PARTS.

Spirit Fires Ltd,
4 Beaumont Square
Aycliffe Industrial Park,
Newton Aycliffe
County Durham,
DL5 6XN
T - 01325 327 221
F - 01325 327 292
www.cvo.co.uk

The information supplied in this manual is correct at the time of publication; Dated on the 31/1/2012. There may be changes made in future as we improve our products.

If there are any queries about this appliance please email info@cvoco.uk or call our technical department on 01325-327221.

Visit our web site for further details of our products